

What is claimed is:

1. A low noise roller chain comprising:

inner and outer links alternately arranged and articulated together in a longitudinal direction of the roller chain,

the inner links each having a bushing and a pair of inner plates connected to opposite ends of the bushing, respectively,

the outer links each having a pin and a pair of outer plates connected to opposite ends of the pin, respectively, the pin extending through the bushing; and

a rigid roller made of metal and an elastic roller made of elastic material that are arranged end to end and fitted on the bushing so as to jointly form a roller assembly,

the elastic roller having a width along the axis of the roller assembly, which is 13 to 45% of the overall width of the roller assembly along the axis thereof, and

the elastic roller having a thickness, which is larger than the thickness of the rigid roller by 5 to 25% of the thickness of the elastic roller.

2. A low noise roller chain according to claim 1, wherein the elastic roller is arranged in a zigzag pattern in a longitudinal direction of the roller chain.

3. A low noise roller chain according to claim 2, wherein the roller chain comprises two or more longitudinal chain portions

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of uniform lengths, the zigzag pattern of the elastic rollers in one of the longitudinal chain portions being opposite in phase to the zigzag pattern of the elastic rollers in the adjacent chain portion.

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